39260/RAG/C766

SPATIALLY MODULATED INTERFEROMETER AND BEAM SHEARING DEVICE THEREFOR

ABSTRACT OF THE DISCLOSURE

A spatially modulated interferometer incorporates a beam shearing system having a plurality of reflective surfaces defining separate light paths of equal optical path length for two separate output beams. The reflective surfaces are arranged such that when the two beams emerge from the beam shearing system they contain more than 50 percent of the photon flux within the selected spectral pass band. In one embodiment, the reflective surfaces are located on a number of prism elements combined to form a beam shearing prism structure. The interferometer utilizing the beam sharing system of the invention includes fore-optics for collecting light and focusing it into a beam to be sheared, and a detector located at an exit pupil of the device. In a preferred embodiment, the interferometer has no moving parts.